

# AMATEUR RADIO

NOVEMBER 1964



Vol. 32, No. 11



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# "AMATEUR RADIO"

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## OUR COVER

Our interested viewers appear puzzled as to the means by which so much is packed into so little. The unit is one of the Collins Line which, along with many other similar types, has done much to make popular the transceiver type of equipment.

## FEDERAL COMMENT

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## THE AMATEURS' ROLE IN CIVIL DEFENCE

Before World War II, the Amateur provided the backstay when emergency communications were required. After the war, the Amateur was instrumental in aiding the establishment and training of communication groups in a number of volunteer organisations.

As these organisations progressed and State Instrumentalities set up and expanded their own communications services, the Amateur's role appeared to become less important; however, when the Civil Defence School was established at Mount Macedon, Victoria, investigations by communications study groups soon revealed that the Amateur still had a very important role to play in the early stages of any emergency.

Many Amateurs have passed through the School as representatives of either the W.I.A. or organisations employing them. The importance of this training to the community is inestimable.

The recognition the Government has accorded W.I.A. representatives in this important work is both gratifying and significant.

Each State Premier's Office is allotted quota for each study group or course. The W.I.A. has always been invited to nominate members for inclusion in the contingent. These study groups embrace every aspect of civil emergency work and thus representatives of every section of the community take part in general discussions; however, specialised studies or courses are held in every field. In these cases every organisation interested in the particular subject is represented.

All that is asked for participants is that they spread the knowledge and experience gained amongst their fellow citizens. In the case of W.I.A. representatives, dissemination is via W.I.C.E.N., the object being to ensure that a maximum number of skilled personnel will be ready to meet any emergency.

Amateurs willing to help in this work should advise their Divisional W.I.C.E.N. Co-ordinator who will arrange for their names to be added to the list of nominees to be forwarded to the Premier's Office. The success of W.I.C.E.N. depends entirely upon the enthusiasm of members.

As an example, the Victorian W.I.C.E.N. group are to participate in a large scale exercise this month. The success of this exercise from an Institute viewpoint is important from the accorded status, but even more so from the aspect of the practical application of the Amateur's knowledge of communications.

FEDERAL EXECUTIVE, W.I.A.

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# AN S.S.B. TRANSCEIVER FOR 52 Mc.

I. F. BERWICK,\* VK3ALZ

A comparison of the block layout for the 52 Mc. Transceiver (Fig. 1) with the original circuit of the PT116 shows that four additional major components are required:

1. A 48 Mc. v.f.o.
2. A 4 Mc. crystal filter.
3. A solid state d.s.b. generator.
4. If mobile operation is intended, a new power supply.

Each of these components is built and aligned as a separate sub-assembly. The order in which they are made is of no consequence and can be done according to availability of components, etc. Be prepared to devote quite a few man-hours to each of these assemblies.

Notes on the circuitry, layout and alignment of each sub-assembly appear later, plus diagrams.

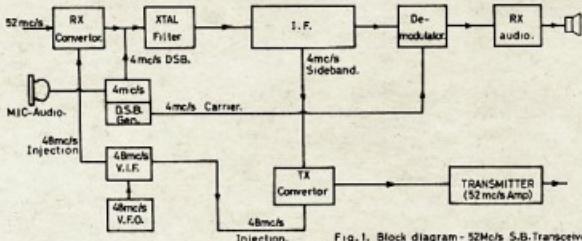


Fig. 1. Block diagram - 52 Mcs S.S.B. Transceiver.

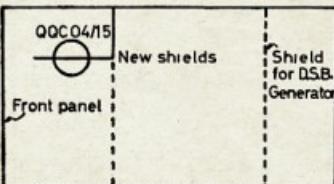


Fig. 2.—Position of New Shields.

The major assembly is the Pye Reporter unit. This is converted as follows:

1. Remove all redundant components and wiring—compare the new circuit with the old for this operation. The following components are redundant:

- (a) Vibrator power supply.
- (b) IFT3.
- (c) IFT1—the can is saved for crystal filter.
- (d) Mike transformer.
- (e) Socket of V10 and its grid wiring.
- (f) Terminal strip for carbon microphone
- (g) Terminal strip for crystal oscillator V4 and crystal oscillator V12—also crystal sockets.

2. Convert IFT2, IFT4, IFT5 to 4 Mc. Remove 100 pF. across each winding and replace with 33 pF. Then re-place IFT2, IFT4, IFT5.

• The author has converted a Pye Reporter PT116 to a 52 Mc. S.S.B. Transceiver. A conversion for any other frequency from 3.5 to 144 Mc. is equally possible.

3. Convert Receiver front-end to 52 Mc. This is done as follows:

(a) Remove coil assembly of L2, L3, L4, re-wind coils with 8 turns 18 B. & S. enamel, wind 2-turn link at cold end of L3. Tap L4 at 7 turns. Replace assembly.

(b) Remove and re-wind L1 with 9 turns 16 B. & S. enamel. Tap at  $\frac{1}{4}$  turns. Replace L1.

tube. The original shield across the socket will have to be modified to achieve this—additional shielding is added to completely isolate the p.a. tank.

The p.a. loading capacitor, an A.W.A. concentric trimmer with screw-driver adjustment, is mounted on the side wall in the p.a. tank compartment. Wind and instal new p.a. coil and loading (link) coil.

Fit a shim brass shield across underneath chassis as shown in Fig. 2.

Mount connectors for mic. input, v.f.o. input, and antenna.

Complete wiring of Reporter unit—running all supply wiring in shielded cable.

Refer to drawings for layout of various components (Figs. 3 and 4).

## CRYSTAL FILTER ALIGNMENT

The performance of the transceiver is critically dependent on this component. I include in some detail two alternative alignment procedures.

**Method 1** is the more speedy and accurate method. The test set-up is as per Fig. 5.

With this set-up the filter response curve is viewed directly on the c.r.o. screen. See Fig. 6.

It is now a comparatively simple matter to correctly align the filter.

TR3 and TR4 (Fig. 7) should be resonated at 4 Mc. If the camel hump is not now symmetrical, TR4 should be detuned from resonance slightly, either higher or lower until symmetry is achieved.

R should now be varied to try and further improve the response curve. 47K to 39K should give a satisfactory result.

If it is desired to measure the pass bandwidth proceed as in Method 2.

If a satisfactory response cannot be obtained, check that IFT1 is correctly tuned. If still unsatisfactory, filter will have to be re-built. Proceed as follows:

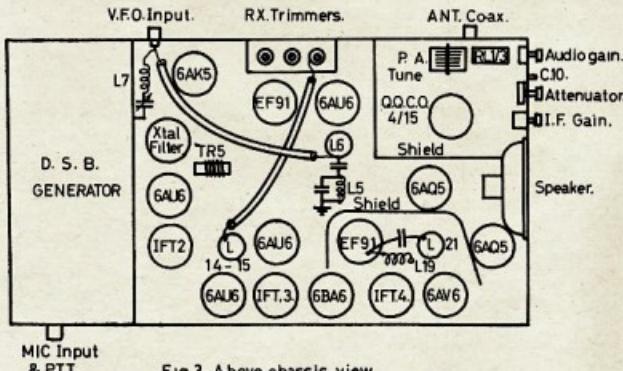


Fig. 3. Above chassis view

Dismantle filter, check pole-zero spacing of each crystal. Measure pole frequencies. There should be two  $f_1$  crystals ( $\pm 50$  c.p.s.) and two  $f_2$  crystals, where  $f_1 - f_2 = \text{pole-zero spacing}$ .

If not, crystals will have to be shifted around until this is so—either by etching or grinding. Frequency can be lowered if desired by rubbing a little solder onto the quartz. Re-build filter when crystals are OK and repeat alignment procedure.

For the average FT243 filter a response of 3 kc. at 6 db. down and 12 kc. at 60 db. is considered satisfactory with passband ripple not exceeding 3 db.

**Method 2:** Test set-up as per Fig. 8. Proceed as follows:

(1) Assuming d.s.b. has been previously aligned, insert carrier by un-balancing VRI (Fig. 16, d.s.b. gen)—a smooth stripe should appear on c.r.o. screen (audio generator should be off). Peak TR3, TR4 for maximum stripe width.

(2) Remove carrier, inject audio signal (1,000 c.p.s.). If filter correct a nearly smooth stripe should appear. If not, carrier and/or unwanted sideband are present, as Fig. 9.



FIG. 6

It is now possible to measure (a) the pass-band response by plotting stripe height in inches or volts (if the c.r.o. is calibrated) against frequency, using  $db. = 20 \log E_i / E_s$ , where  $E_i$  is the maximum stripe height; (b) the stop-band response by plotting stripe ripple against frequency, using  $db. = 20 \log E_i / E_s$ , where  $E_i$  and  $E_s$  are as in Fig. 10.

When a picture of the response curve is obtained by this method, the necessary adjustment of TR4 and R can be made to complete the alignment of the filter.

In this discussion no mention has been made of the frequency of the carrier crystal relative to the filter. In v.h.f. it is usual to use upper sideband.

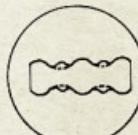


FIG. 9A  
1 Sideband + carrier

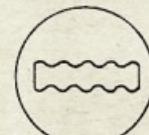


FIG. 9B  
2 Sidebands no carrier

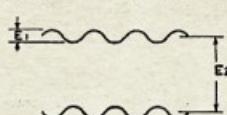


FIG. 10.

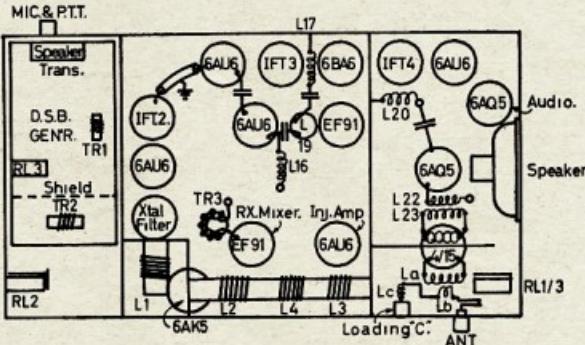
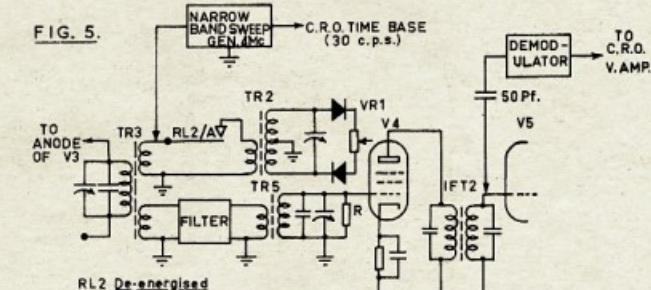


FIG. 4. Under chassis view.

FIG. 5.



RL2 De-energised  
D.S.B. Generator off

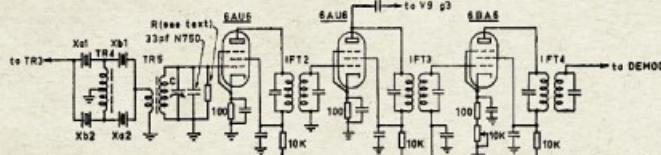


FIG. 7 Xtal FILTER & IF

All bi-passes 2.2K pF. unless otherwise stated.

C—Phillips trimmer.

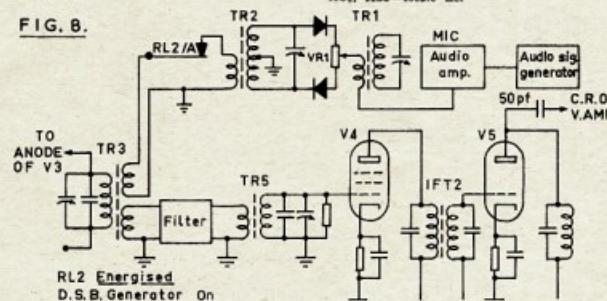
TR4—18 turns 18 B. & S. enamel on Q2 toroid (Ducom).

TR5—Primary: 4 turns 18 B. & S. enamel on Q2 toroid.

Xal. Xa2—4000.0 kc.

Xb1, Xb2—4002.0 kc.

FIG. 8.



RL2 Energised  
D.S.B. Generator On



injection voltage from appearing at the EF91 grid and driving this stage into non-linearity. A similar circuit arrangement is used between EF91 and 6AQ5, the 6AQ5 being neutralised. Parasitic chokes are fitted in the anodes of the EF91, 6AQ5 and QQC04/15.

The final anode tank is designed to match a 50 ohm load to a 12,000 ohm plate-to-plate impedance.

Alignment of this section is straightforward. All tanks are grid-dipped to the appropriate frequencies. Neutralise the 6AQ5 according to accepted practice, peak the 52 Mc. coils for maximum drive at 52.5 Mc., adjust the traps for minimum 48 Mc. feedthrough, and carry out linearity checks of the final according to the approved procedure.



The active components in this section are solid state to save space, and simplify the mechanical considerations. The complete unit is wired on a matrix board which fits neatly in the space vacated by the power supply. All information necessary for its construction is given in Fig. 18.

The diodes should be selected so that their forward resistances are approxi-

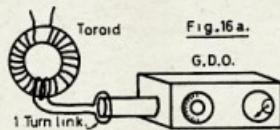


Fig. 16 a.

G.P.O.

**Fig.16. D.S.B. Generator**

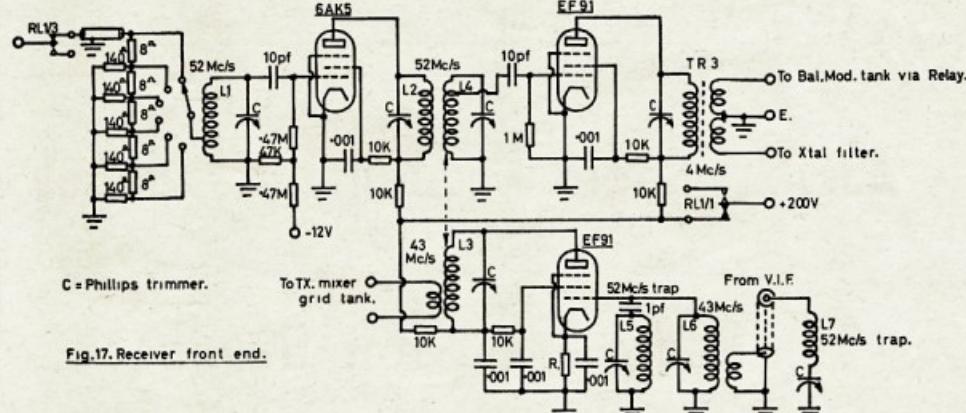


Fig. 17. Receiver front end.

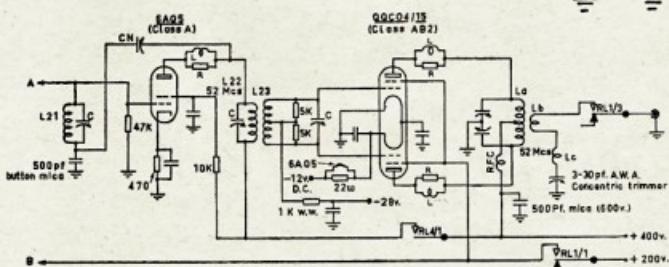


Fig. 16. Ranta List

- FIG. 16 Parts List

D1. D2—OA85e.  
 Q1, Q2, Q3—OC44.  
 TRI—Primary: 14 turns 14 B. & S.; secondary  
     4 turns 18 B. & S.  
 TR2—Primary: 14 turns 14 B. & S. c.t.; sec-  
     ondary: 4 turns 18 B. & S. Both TR

### TRI on Q2 toroids (II)

- Fig. 17 Parts List**

All bypasses are 1K pF. ceramic.  
 C1—Philips trimmer.  
 R1—8 ohms, carbon.  
 R2—140 ohms, carbon.  
 L1—8 turns 16 B. & S., tapped 1.5 turns.  
 L2, L3—14 turns 18 B. & S. L4 tapped a  
     7 turns Wind two-turn link at cold  
     end of L2.  
 TR3—Primary: 14 turns 14 B. & S.; Secondary:  
     1 and 2: 4 turns 18 B. & S. each. Core:

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Check carrier balance, the potentiometer is the coarse balance control and the capacitor the fine control. It will be necessary to find by experiment across which arm of the balanced modulator the capacitor should be placed. 40 db. carrier suppression should be achieved without difficulty. (Remember that a further carrier attenuation occurs in the filter.)

Check double sideband output in the receiver or c.r.o. for intermodulation distortion. Linearity should be satisfactory if the operating conditions for diode balanced modulators are adhered to.

### RECEIVER FRONT-END

Concurrent with modern practice, a stepped attenuator is incorporated. This is mounted on the front panel. The speaker transformer has to be shifted to the rear side wall to make room for this. The 48 Mc. injection amplifier 6AU6 runs all the time. The h.t. to

tion is injected into the i.f. after the mixer.

This is achieved as follows: When RL2 is de-energised during receive, thus removing the load from the bal. mod. tank, the balanced modulator becomes unbalanced. A Philips trimmer wired across the contacts of RL2 provides a means of adjusting the level of carrier injected into the i.f.

Carrier derived a.g.c. is shown on the circuit (Fig. 18). An audio derived a.g.c. system on a matrix board sub-assembly is available for fitting, this is not shown as most people seem to have their own preferences with respect to a.g.c. systems.

### 48 Mc. V.F.O.

This is constructed as an outboard unit designed for mounting on the steering column of a motor vehicle. The 5 Mc. v.f.o. is a modified Command unit. The heterodyning section and the 48 Mc. v.i.f. are mounted in separate

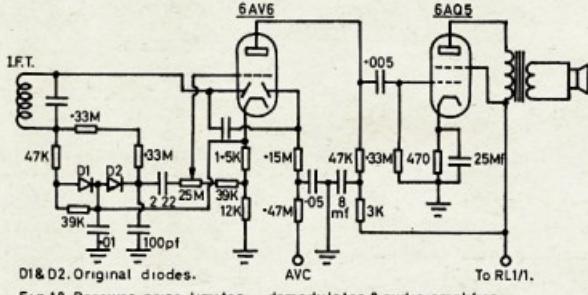


Fig.18. Receiver noise limiter - demodulator & audio amplifier.

the 6AK5 and EF91 is removed by RL1/1 during transmit, so disabling these stages. See Fig. 17.

The first two i.f. stages run at constant gain at all times. The third i.f. stage has both manual and automatic gain control.

The manual gain potentiometer is mounted on the front panel as follows: Remove top right hand speaker mounting screw, drill a 3/8-inch clearance hole, using the old mounting hole as centre. Mount miniature 10K potentiometer in this hole.

### NOISE LIMITER, DEMODULATOR AND AUDIO AMPLIFIERS

This section (Fig. 18) is largely unchanged from the original Reporter circuitry. Carrier for s.b. demodula-

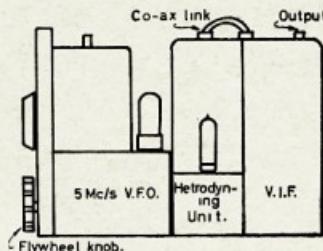


Fig.19. 48Mc/s V.F.O.(side view)

shielded compartments at the rear of the modified Command unit. (See Fig. 19.)

The modification to the Command unit is as follows:-

- (1) Remove all wiring under chassis.
- (2) Remove front panel, disconnect bowden drive to oscillator capacitor.
- (3) Cut through chassis in a line with front of oscillator capacitor.
- (4) Mount front panel on the oscillator portion of the chassis so that the tuning gears line up with the oscillator capacitor drive gear.
- (5) Wire up as per circuit (Fig. 20). The oscillator is a Franklin followed by a cathode follower and then a class A tuned stage.
- (6) Fit a large flywheel tuning knob.

The construction of the heterodyning unit and v.i.f. is straightforward and the diagrams should be self explanatory. Note that these stages run all the time.

(Continued on Page 8)

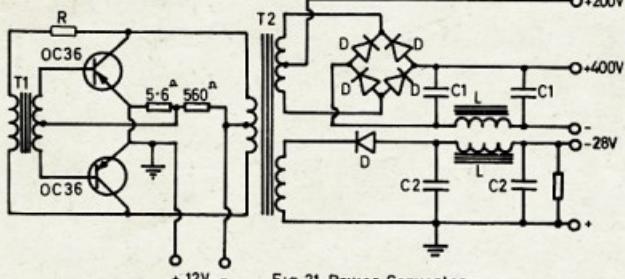


Fig.21. Power Convertor.

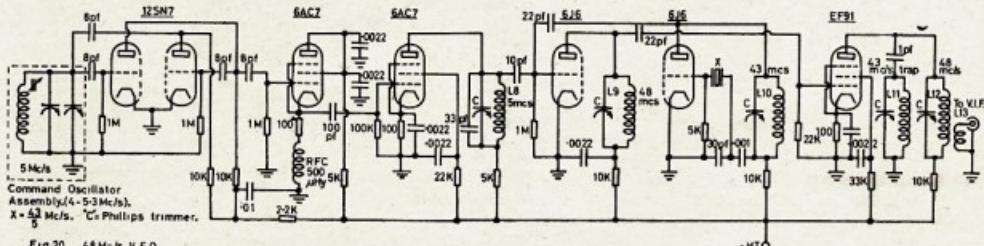


Fig.20. 48 Mc/s V.F.O.

# FURTHER NOTES ON WINDING TRANSFORMERS

In his article, "Re-winding Transformer" ("A.R.", Sept. 1964), Ian Phillips has stated way to determine the turns per volt of the windings. I do not wish to be unkind, but his method is misleading.

The turns of a 5 or 6.3 volt winding are not necessarily a multiple of 5 or 6 respectively. A power transformer is designed to give correct heater voltages on load (all windings normally fully loaded).

The following factors are taken into account to arrive at the t.p.v.:-

Flux density (core loss).

Wire gauges (copper loss),

Increase in wire resistance with temperature rise,

The final estimated working temperature above ambient. These determine the transformer "regulation".

A typical design of about 100 to 150 watts rating would probably use a core of the E and I waste-free type, either a 1½" centre leg and 2" stack, or 1½" centre leg and 1½" stack. Core material is a matter of size and temperature rise, and can vary accordingly.

However, to get to the point, the heater winding voltages off load and therefore the turns depend on the factors stated earlier. This may be seen from the figures given in Table 1, and the same applies to other core sizes and areas.

Core Leg X Stack (Inches)	Appro. Net Area (Sq. In.)	T.P.V. for Flux in Kgausses*		
		10	11	12
1½ X 1½	2.1	3.3	3	2.75
1½ X 2	2.3	3	2.75	2.5
Turns 5v. wdg.	→	18	16	15
	2.1	(5.46)	(5.32)	(5.46)
Turns 6.3v.wdg.	→	22	20	19
	2.1	(6.67)	(6.68)	(6.9)

Table 1.  
Figures in brackets are typical "off-load" voltages.

\* Multiply by 6.45 for K lines/sq. in.

It will be seen that a winding of 18 turns could be a 5v. or 19 turns a 6.3v. winding. Therefore, with a faulty transformer, it is a little difficult, if not impossible, to arrive at the t.p.v. If not faulty, the turns of the heater winding divided by the off-load volts will give the t.p.v. provided the correct voltage is applied to the primary, and the meter is reasonably accurate. (All secondary windings unloaded.)

The only other way is to assume a normally used flux density, e.g. 11 Kgausses or approx. 70,000 lines, and the t.p.v. is near enough to 6.8 divided by the cross-section area in square inches as measured with a rule. This gives you a fair chance of being "near the mark" or can be used for a complete re-wind.

—Andy Roudie, VK3UJ.

## S.S.B. TRANSCEIVER

(Continued from Page 7)

### POWER CONVERTER

A suitable power unit is shown in Fig. 21.

T1: primary 62 turns c.t., 16 B. & S. secondary 50 turns c.t. of 22 B. & S. Core: Ducon Q1 toroid.

T2: primary 62 turns c.t., 16 B. & S. secondary (1), 600 turns c.t., 26 B. & S.; secondary (2), 100 turns, 26 B. & S. Core: Permalloy C core, 100 v.a. rating. Note: Core from APX-1.

A suitable control unit is shown in Fig. 22.

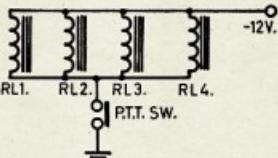


Fig. 22. Control circuit.

### CONCLUSION

A complete transceiver has been described. Enough information has been presented to enable a transceiver to be designed for any frequency—3.5 to 144 Mc.—using Reporter components.

By building one's own along the lines indicated, it is possible to enjoy the advantages of transceiver operation at a small fraction of the cost of commercial units.

Finally I am indebted to VKs 3AHL, 3ADF and 3ZCZ for numerous suggestions which have proved invaluable during the development of this unit. \*



### D.X.C.C. CONTEST

"All the DX you can work in a year" is the object of the First Annual D.X.C.C. Contest being sponsored by the Long Island DX Association in order to stimulate DX activity throughout the world.

The Contest will begin at 0001 G.M.T., 1st January, 1965, and end at 0000 G.M.T., 31st December, 1965. Contestants will be required to work as many different countries as possible in order to be eligible for the special prizes which will be offered by the L.I.D.X.A. Any mode and any band may be used but just one equipment from each country will count. The Contest will be open to all A.R.R.L. C.C. rules and the A.R.R.L. Countries List will be followed.

The prizes to be awarded to the winners include the Long Island DX Association Trophy, going to the top scorer in the world; six unique trophies, one to be awarded to the top scorer on each of the six continents; and individual certificates to be awarded to the top scorers in each country from which entries are submitted as well as winners in each of the U.S.A., Canadian and Australian districts.

At the close of the Contest, participants will be required to submit just their lists of confirmed countries worked to "L.I.D.X.A. Contest," P.O. Box 599, Lynbrook, New York, with marks no later than February 15, 1966. Potential winners will be notified and will be requested to submit all their Contest QSLs to the Contest Committee whose members are: Joe Hellman, W3MES; Dorothy Strauber, KGME; Win Tamer, WAQDNW; Jim Marv, W4TCR; W4TCR; completed list of winners will be published as soon as the committee has completed the tabulation of the entries. For any additional information, contact the L.I.D.X.A. Contest Committee members via P.O. Box 599, Lynbrook, New York.

—VK488

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With the co-operation of our overseas associates our crystal manufacturing methods are the latest.

# ROSS HULL MEMORIAL V.H.F. CONTEST, 1964-65

The Federal Contest Committee of the Wireless Institute of Australia invites all Australian and Overseas Amateurs and Short Wave Listeners to participate in this annual Contest which is held to perpetuate the memory of the late Ross Hull whose interest in v.h.f. did much to advance the art.

A handsome Perpetual Trophy is awarded annually for competition between members of the W.I.A. in Australia and its Territories, inscribed with the name and life work of the man whom it honours. The name of the winning member of the W.I.A. each year is also inscribed on the Trophy. In addition, this member will receive a suitably inscribed, framed photograph of the Trophy.

**Objects:** Amateurs in each VK Call Area will endeavour to contact Amateurs in other Australian Call Areas and Overseas.

**Date of Contest:** 12th December, 1964, to 10th January, 1965.

**Duration:** From 0001 hours E.A.S.T. (1401 hours G.M.T.) on 12/12/64 and 11/12/64 respectively, to 2359 hours E.A.S.T. (1359 hours G.M.T.) on the 10/1/65.

## RULES

1. There shall be three main sections to the Contest:

- (a) Transmitting, Open, 52 Mc. and higher.
- (b) Transmitting, Phone, 52 Mc. and higher.
- (c) Receiving, Open, all bands, 52 Mc. and higher.

2. All Australian and Overseas Amateurs may enter for the Contest whether their stations are fixed, portable or mobile.

3. All Amateur v.h.f. bands may be used, but no cross-band operating is permitted.

4. Amateurs may enter for any one of the transmitting sections. All contacts must be consecutively numbered in the one number sequence to facilitate checking.

5. Only one contact per band per station is allowed each calendar day.

6. Only one licensed Amateur is permitted to operate any one station under the owner's call sign. Should two or more operate any particular station, each will be considered a contestant and must submit a separate log under his own call sign.

7. Entrants must operate within the terms of their licences.

8. **Cyphers:** Before points may be claimed for a contact, serial numbers must be exchanged and acknowledged. The serial number of 5 or 6 figures will be made up of the RS (telephony)

or RST (c.w.) report plus three figures commencing from 001 for the first contact and will increase in value by one for each successive contact. If any contestant reaches 999 he will start again with 001.

9. **Entries** must be set out as shown in the example, using only one side of the paper. Entries must be postmarked not later than one month after the Contest (i.e. not later than 10/2/65) and be clearly marked "Ross Hull Memorial V.H.F. Contest, 1964-65," and addressed to the **Federal Contest Committee, W.I.A., Box 633J, G.P.O., Brisbane, Queensland.**

10. Scoring for all sections will be based on the attached table. Contestants will have to agree between themselves as to the distance between their stations. Such distances must be shown in their log entry in the column usually used for remarks or bonus points.

11. **Logs:** All logs shall be set out as in the example and in addition will carry a front sheet showing the following information:

Name ..... Call Sign .....  
Address ..... Section .....  
..... Claimed Score .....

**Declaration:** I hereby certify that I have operated in accordance with the Rules and Spirit of the Contest.

Signed .....

Date .....

**Note:** Entries on the front sheet must be clearly shown in block letters.

12. The right is reserved to disqualify any entrant who, during the Contest, has not observed the regulations or who has consistently departed from the accepted code of operating ethics.

13. The ruling of the Federal Contest Committee of the W.I.A. will be final. No dispute will be entered into.

14. **Awards:** Certificates will be awarded to the winners of each section in each VK and Overseas Call Area. The VK contestant who returns the highest score in the transmitting sections and who is a financial member of the W.I.A. will hold the Trophy until the next Ross Hull Contest is decided, and in addition will receive an appropriately inscribed photograph of the Trophy.

## GENERAL

Several suggestions were received regarding the duration of the Contest being too long. It was suggested that the period of the Contest remain the same, but that contestants submit a

log for a seven or nine-day period of the Contest. This period would be selected by the individual contestant. Before taking any steps in this direction we would like to have a much wider expression of opinion on this matter and comments are invited.

It is suggested that contestants obtain a large scale map of Australia and of their State and mark on these maps the radial distances from their location in accordance with the scoring table.

## RECEIVING SECTION

1. Short Wave Listeners in Australia and Overseas may enter for the Contest, but no transmitting station may enter.

2. Contest times and logging of stations on each band are as for the transmitting sections.

3. To count for points, logs will take the same form as for transmitting sections but will omit the serial number received. Logs must show the call sign of the station heard (not the station worked), the serial number sent by it, and the call sign of the station being worked.

Scoring will be on the same basis as for transmitting stations. It is not sufficient to log a station calling CQ.

4. A station heard may be logged only once per calendar day on each band for scoring purposes, but additional reports will be of value to the F.C.C.

5. **Awards:** Certificates will be awarded to the highest scorer in each VK and Overseas Call Area.

## SCORING TABLE

Distances Between Stations	52 Mc.	144 Mc.	420 Mc.	576 Mc.	Higher
Up to 10 miles					
Over 10 and up to 25 miles				1	1
Over 25 and up to 50 miles			2	2	10
Over 50 and up to 100 miles		10	10	10	30
Over 100 and up to 200 miles	4	2	20	20	60
Over 200 and up to 300 miles	10	4	30	30	80
Over 300 and up to 500 miles	20	10	40	40	
Over 500 and up to 1,000 miles	10	16			
Over 1,000 and up to 5,000 miles	2	30			
Greater than 5,000 miles	10	40			
	20	50			

## EXAMPLE OF RECEIVING LOG

Date/Time	Band	Station Heard	RST/N.R. Sent	Station Called	Points Claim.	Blank

## EXAMPLE OF TRANSMITTING LOG

Date/Time	Band	Emiss- ion ation	Call Sign	RST/N.R. Sent	RST/N.R. Revd.	Distance	Points Claim.	Blank

NOTE.—State whether Time is E.A.S.T. or G.M.T.

NOTE.—State whether Time is E.A.S.T. or G.M.T.

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# SIGNALS SERVICE COURSE

Held at Macedon, Vic.

The No. 2 Signals Service Course, held at Macedon, Vic., from 6th to 11th September, was attended by 30 members, of these 20 were Amateurs.

Present were: P. A. Alexander (VK2PA), J. B. Battwick (VK3OR), K. V. Benwell (W.A.), L. Blagbrough (VK4ZGL), S. Briggs (VK4SC), T. I. Cairnduff (Tas.), G. C. Casboult (Tas.), Major E. Collett (VK2RU), H. P. Fuller (VK8TF), M. W. German (VK4ZGM), R. G. Harris (VK5RR), R. H. Hildred (VK4RE), Sergeant R. G. Holdway (Qld.), T. A. Holmet (Vic.), P. B. Jackson (VK2PPJ/T), C. E. Love (N.S.W.), M. J. McDonald (VK6MM), M. M. McGrane (VK4MZ), B. A. McRae (VK5MC), P. L. Mahan (VK3AOY), L. A. Maschette (VK6ZDM), D. E. Melbourne (VK2NK), G. A. Middleton (VK5GO), R. A. Murphy (VK5ZDX), M. J. Owen (VK3ZEO), Rev. Bro. T. Radcliffe (N.S.W.), R. V. Saunders (N.S.W.), Major R. L. Topp (VK3QT), B. E. Wearne (N.S.W.), E. W. West (W.A.).

It is the first time that a course has been attended by so many people with hobby as a common bond. The others are all connected with communications in some form or another.

The purpose of the course is to instruct the members of the duties of Signals Officers for the Civil Defence Services in Australia.

A background of nuclear, biological and chemical warfare was given.

Message writing, field telephones and cable laying, signal centre duties and records, raising and training personnel, radio procedure and exercises, and planning radio exercises were covered by the course.

One of the major factors evolved from this course was that no matter what form of communications you are using, the procedure in message handling must be standardised, so that confusion does not arise. A badly controlled and confused communication system is worse than no communications at all!

With the development of Civil Defence in the various States, Amateurs may be required to assist in the train-

ing and operating Civil Defence Signals Sections. We must attempt to get the most from our members who are attending these courses and there will no doubt in the future be others attending similar courses.

We all know that communications are the backbone of any service, be it private, public or civil. These Amateurs and the others are doing their best to prepare for natural and other disasters. What are you doing? Contact your local W.I.C.E.N. Co-ordinator and offer your services.

—Alyn Maschette, VK6ZDM.

## NEW CALL SIGNS

JULY, 1964

VK1AXX—J. W. Hutchinson, C/o. Department of External Affairs, Administrative Office, Parkes, A.C.T.

VK1EM—E. J. Mulholland, Flat 11, Block 14, Northbourne Flats, Braddon, A.C.T.

VK3UUN—G. A. Sangster, 23 Hollis Ave., Goulburn.

VK3BAE—D. C. Boundy, 201 Kennedy St., Armidale.

VK2ZFE—W. P. Alpin, Banksia St., Orange.

VK2ZFK—A. N. Bowden, 40 The Grove, Mosman.

VK2ZLJ—A. J. Jones, 10 McAlister Ave., Engadine.

VK2ZMK—J. P. Mack, 78 The Crescent, Cheltenham.

VK3LL—M. W. Busch, 72 Goold St., Bairnsdale.

VK3ACT—J. Cutts, 648 High St., Kew.

VK3AV—N. O. Duncan, 11 Kenby Rd., Heathmont.

VK3ANH—Geelong Radio and Electronics, Guild Hall, Myers St., Geelong.

VK3ZCN—F. A. Leverhaa, Harcourt.

VK4ZLL—L. Labruyere, 157 Warry St., Fortitude Valley.

VK4ZPM—W. Spring, St. Leo's College, St. Lucia.

VK4ZTT—T. C. Thompson, Boys' Grammar School, Rockhampton.

VK5PA—F. Brandon, C/o. Dpt. of Civil Aviation, Oodnadatta.

VK5UJ—M. S. Burns, 4 Arthur St., Whylla.

VK5QM—W. H. Higgins, 15 Beta Cres., Panorama.

VK5ZBD—G. Downing, 4 Bella St., Gawler East.

VK5ZDD—M. J. Bates, 23 Alison Ave., Blackwood.

VK5ZJD—J. E. R. Dunkley, 54 Radstock St., Kilkenny.

VK5ZF—G. C. Adams, 225 Shepherd Hill Rd, Eden Hill.

VK6ZEM—G. E. Armstrong, C/o. Station 5WA, Wagin.

VK6ZEM—B. M. McDonald, Station: Munthoola Farm, Williams; Postal: P.O. Box 47, Williams.

VK6ZOF—E. J. Dennis, P.O. Box 51, Rabebul.

VK6PFL—J. G. Porter, C/o. Eng. Branch, Posts and Telegraphs, Port Moresby.

## R.S.G.B. 21-28 Mc. TELEPHONY CONTEST—DECEMBER 5-6, 1964

Radio Amateurs throughout the world are again invited to take part in the annual R.S.G.B. 21-28 Mc. Telephone Contest to be held this year on December 5-6.

Attention is drawn to changes in the scoring system as described in detail in Rule 8. Contestants are advised that in previous years many points were lost by those who did not read this rule carefully.

Duration: The Contest will start at 0700 G.M.T. on Saturday, December 5, and end at 0900 G.M.T. on Sunday, December 6, 1964.

The Contest is open to Licensed Amateurs in all parts of the world.

Contacts may be made using any telephone system for which the entrant is licensed. Only one contact on each band may be made with a specific station, whether fixed, portable, mobile or mobile. Any duplicate contacts must be logged and clearly marked as duplicated without claim of points.

Contest Exchanges: An exchange of RS reports followed by a three figure serial number starting with 001 for the first contact and increasing by one for each successive contact.

Entries: (a) should be clearly typed or written on one side only of a landscape or international A4 size paper; (b) may be ruled in columns head (in this order): (i) Date/Time (G.M.T.); (ii) Call Sign of Station Worked; (iii) Name of Town; (iv) He sent me; (v) Band; (vi) Bureau Postals; (vii) Polaroid claimed; (c) must be addressed to the Contest Committee, Radio Society of Great Britain, 23 Little Russell St., London, W.C.1, England, the name of the Contest being clearly shown on the top left hand corner of the envelope, which must be postmarked no later than December 21, 1964.

Rule 8. Scoring: Overseas stations may only claim points for contacts with British Isles Stations (G, GB, GC, GD, GI, GM and GW). Overseas scoring will be as follows: Each completed contact with a British Isles station will count 10 points. In addition, a bonus of 50 points may be claimed for the first contact with each British Isles country-numeral prefix on each band. A further 50 bonus points will be scored for every ten stations worked in each of the above categories irrespective of band.

Certificates will be awarded to the leading station in each VK call area.

The usual cover sheet and declaration must accompany each log.

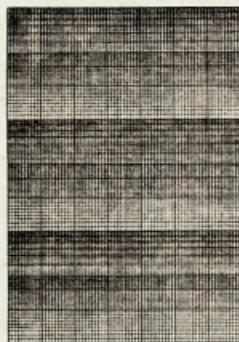
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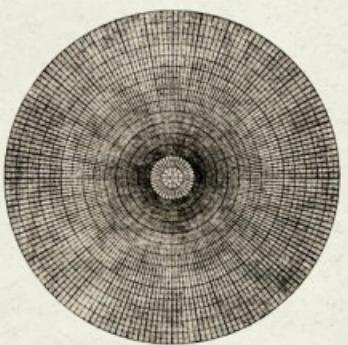
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Polar Co-ordinate.



# V H F

52 - 144 - 420 - 576 - 1296 Mc.

Sub-Editor: LEN POYNTER, VK3ZGP,

14 Esther Court, Fawkner, N.15, Victoria

ADDRESS CORRESPONDENCE FOR THIS PAGE DIRECT TO THE SUB-EDITOR

The following letter from John Lee, W6YKS, contains some interesting news from U.S.A. and is published herewith:

"I just received a copy of your Ham magazine, 'Amateur Radio', and am glad to see that Hams in other countries in the world have not given up v.h.f. Also find it very interesting that you are using the u.h.f. frequencies. They are not in wide use here in the U.S.A., considering the number of Hams here."

"We also have the television problem on 50 Mc. but it isn't because the t.v. station is inside the Ham band. Our lowest channel is Channel 2 (54-69 Mc.)."

"There are quite a few Hams on 50 and 144 Mc. all over the country. Now that the amateur cycle has come to a minimum, band openings are few and far between, some of the Hams have gone to working tropo and meteor scatter for DX. The best time for this propagation seems to be early in the month (6000 to 6500 km) and then the band path seems to be north and south. Distances of around 1000 miles are not uncommon for the high power stations. However, I only run 250 watts input with a single 4-125A (4D21) and have an eight ohm speaker at about 46 feet. So far my best scatter DX is San Francisco (about 275 miles). Other stations work consistently distances such as from Los Angeles to San Francisco and from San Francisco to Seattle, and Portland, Oregon. On most evenings, of course, you know what can be done."

"Well some day the sunspots will be back and maybe we will have a QSO on six. I will be there as I leave the six metre receiver on most all the time I am awake. Also, if you are interested, we have many antennas available here and would be glad to share them with you. For now, good luck and DX."

John's address is P.O. Box 472, Fortuna, California.

As VK2 and VK3 notes have not been received for some time, would these Divisions please consider a new correspondent? 73, 3ZGP.

## LATEST LIST OF V.H.F./U.H.F. RECORDS FOR AUSTRALIA

50 Mc.:—  
VK3ALZ-XE1FU—1/5/59—8.418 miles.

144 Mc.:—  
VK2KPF-ZL1ADE and ZL1AUM—24/12/63—1.351 miles.

432 Mc.:—  
VK3OB—3/VK3ZAV—3—19/1/64—97.3 miles.

576 Mc.:—  
VK6ZDS—6-VK6LK/6—15/12/63—101.2 miles.

1215 Mc.:—  
VK2AKC-VK2ZCF/2—4/3/63—46.8 miles.

3200 Mc.:—  
VK3XA-VK3ANW—18/2/50—9.0 miles.

3300 Mc.:—  
VK2ZGK—VK3ZGK/3—14/12/63—63.5 miles.

## VICTORIA

This past month has seen a rise in activity on the bands as winter's long and cold nights are giving way to longer and warmer days. The advent of the warmer nights have given incentive to a number of the stations to start signs (and older ones) again on each service. There is an increase in the users of the naut frequencies since the "Activities Day" on 13th Sept. in Victoria. The 53.032 a.m. net is receiving quite a lot of attention and some 40 odd stations have been heard on this net. The f.m. net on 52.325 Mc. is slowly picking up. There is a small supply of 70 Mc. f.m. mobiles coming on the market here and they are being snapped up.

The 144 Mc. v.h.f. enthusiasts are working on their gear, ridding themselves of Channel 0 problems. With luck quite a few of the regulars will be getting amongst the DX during the Ross Hill Contest. Other States are also catching on. Mobiles are getting down the low end of the band during non programme (test pattern) hours and then higher in the band during regular programme times. Approx. 3.30 p.m. onwards (except for special events) Channel 0 will be programming. Approx. 9 a.m. onwards is test pattern time.

From comments quite a few fortunate ones have no problems, however as the activity increases, doubt so will the problems. Most of us will be using vertical polarisation to minimise possible problems.

Two metres is showing quite an increase in activity. The field day season will commence in October and take place on the third Sunday of each month. The dates which coincide with the National Field Day. Same rules as last year will apply. There promises to be more activity on this band this season.

432 Mc. has attracted quite a following with many stations active. Last reg. on 1296 miles two-way was made between 3Z2P/R and 3OB/P. We trust the Amateurs concerned will make a claim for the record—anything to pass the distance?

144 Mc. has interested a few here in Melbourne and I believe in Geelong. 3AUX has a really "hot" converter with cavities constructed from a well known brand of mustard seeds. We gather the expression "not worth 2 bob" can still apply here as we have seen the unit and can work with the fact that there is more than "2 bob's" worth of silver in it.

It is hoped soon to produce a "V.h.f. Newsletter" in VK3 and if our plans are realised we hope to keep more in touch with you per this medium. Handbooks for the VK3 and VK5 varieties we have no illusions that it won't be hard work. Here's hoping for success. 73, 3ZGP.

VKA—Mc. stations and frequencies from the Melbourne area, supplied at the request of other V.H.F. Divisions. 3ZKJ: 52.325; 52.326; 52ZGP (fixed and mobile); 53.30: 3ZCO; 52.35: 3ZNJ; 52.37: 3ZIX; 52.325: 53.00; 3BX: 3AAA, 3AFB, 3ZCK, 3ZDP, 3ZEL, 3EM; 52.65: 3ZCO; 52.66: 3ZPA; 53.00: 3WI; 52.70: 3ZPA; 52.75: 3ZPA; 52.80: 3ZPA; 52.85: 3UK; 52.90: 3VSA; 52AF, 5AII, 5AFJ, 5AHZ, 5AJU, 5ALB, 5ALK, 5ALT, 5AZT, 5ZBN, 5ZBR, 5ZCB, 5ZCE, 5ZCK, 5ZCM, 5ZCO, 5ZDC, 5ZEP, 5ZGD, 5ZGP, 5ZLY, 5ZJP, 5ZK, 5ZKJ, 5ZKQ, 5ZKU, 5ZKZ; 53.32: 3ZP; 53.40: 3ZCK; 53.72: 3ZCK; 5ZPB; 3AK, 3AFU, 3AFV, 3ZNN; 53.81: 3UU; 5ZCO; 53.82: 3ZML, 3ZPA; 53.84: 3ZGM; 53.86: 3ZCO. The following stations are v.f.o. or v.x. controlled: 3ZPA, 3ZPA, 3AHL, 3ALZ.

Most of the stations in the above list are very active. The equipment used in the 53.032 Mc. net is mainly Fye Reports (Mk. I, II, III), using respectively 15s., KV17/7, and 3/12 final units. A number of 12 and 18 volt batteries have car-to-car range of 5-10 miles in the city and up to 40 miles across country, but the freq. of the tv must be plus or minus 500 cycles. The tv's are commonly built with quarter wave whips on mobile, ground plane, vertical beams, and coaxial antenna for home or base stations.

A few changes have had t.v.l. problems. The main beam being front and vertical and the little harmonic setting into the i.f. strip. The first trouble is easily cured by fitting a 4 ft. length of 300 ohm feedon on the antenna terminal of the t.v. set and trim down until

picture and sound are restored. The final length varies between 44 and 46 inches, depending on the length of feeder between the antenna terminal and the tuner. The harmonic trap can be cured by fitting a series tuning trap in the grid of the multiplier stages in the transmitter. Tune the trap to the unwanted harmonic that is causing the trouble, which is usually between 30 and 40 mcs. The same system works on 144 mcs to prevent interference on Channel 55.

**V.h.f. Convention.** The V.h.f. Group held their Convention on 10th and 11th October at Ferny Hills in the Dandenong Ranges, about 20 miles east of Melbourne. It was quite a success and it is planned to hold more in the years to come.

**V.h.f. Group Meeting.** The last two v.h.f. group meetings (which are held on the third Wednesday of each month) were given over to the 144 mcs. contest. Many stations have commercial equipment, which many VK3ers have been converting to the local nets on 145.854 and 146 mcs.

**Two Metre Beacons.** Planning is well under way for the beacon. It should be operating in the new year. The proposed frequency is 145.00 mcs. The VK3 6 mc beacon on 51.75 mcs. (TVF 10 of 20kw. e.r.p.) is fm. and operates between 1100 hrs. and 2300 hrs. daily. The 144 mcs. beacon is to be located in the Wagga Wagga direction, and the other in the Brisbane direction. Reports to hand show that it is very strong in some parts of New Zealand—to the effect that it blotted out their CB signals. We'll have a little work to do. A local daily newspaper reports that the managing director of the station can watch Channel 0 at his home in Hayman Island with an ordinary fringe area antenna and an unmodified commercially available t.v. rx. 73, 3ZCK.

## QUEENSLAND

Signals which have been absent from the bands during winter are gradually beginning to re-appear with the approach of the summer months. Several stations of us have undertaken to re-build our programme during winter or just plain hibernate. Bands have been continually active last month and many enjoyable contacts have been made.

A steady stream of new voices have been heard on the bands. Lately it seems that many of the local low-banders have found that the very high frequencies are relatively free of noise and interference. 4WIV from Ipswich is using a 100w. crossing on 6 mcs. 59.00 until he can become fully operational on 6 mc. Paul 4UL has been convinced that he should make a noise as 4AL did (the convincing). Even "gravel voice" Claude 4UX from up north was heard on 2 mcs recently. What was Charlie 4UC who is heading the Youth Radio Scheme here in Queensland. Both these fellows spoke via the station of Bruce 4ZP.

While not chasing sidebanders on 30 mcs, Reg 4VX has been having plenty of discussion around his favorite spot on 30 mcs. He uses a 6 m. Low power mobiles are now a thing of the past as Reg runs 8 watts to his 636 with no melting interference of the valve. Also I have heard that 4WF is going mobile on 32 mcs.

George 4ZL has established recently to hear a couple of low banders using fixed frequency fm. well above 53 Mc. George wound his v.f.o. up to their frequency and broke in. They were most mystified when George's car caused a temporary but his Marmon was completely ruined by the limiters. However, contact was finally established and explanations followed.

With all this talk of full licence operators, I assume you think the Z calls are all licensed and have not yet been awarded. Frank 4ZAS is using his new v.f.o. to best advantage and has just obtained an AR7. Frank has now retired from work and his voice is being heard more often on the bands now. Alf 4OL who is well known as 4WL has been seen around and he was told before he left, "don't catch too many and save a lump of shark for Bill".

Tom 4ZAL made many calls during his recent holidays. He met quite a number of Hams down in Southport who are interested in v.h.f. John 4ZK, 4WVS, Alf 4OL, Doug 4SR and Bob 4SK all send their 73 and will be pleased to meet any of the boys who venture down that way. Doug will be shifting his QTH to the Wondal area as he has been transferred

## THE BEACON BOX

### VK5VF—

6 Metres — 53.000 Mc.

2 Metres — 144.800 Mc.

One call on c.w. then carrier for 40 seconds, then repeat, etc. Operation is almost continuous.

### VK6VF—

6 Metres — 52.006 Mc.

2 Metres — 145.060 Mc.

Automatic c.w. identification with approximately four seconds key-down position. Operation is almost continuous.

### VK3: ATV—

51.75 Mc. f.m.

0900—2200 hours daily.

(100kw. e.r.p. 2600 ft. elevation)

Arthur did tell of his many efforts trying to make contact on 6 mx from Normanton to New Guinea when he was stationed up there. He used to call CQ VK9 quite a bit but could not break through. While on the subject of VK9, someone please tell Paul 9ZBV that he can come back and use his old call sign since they have decided to close down the office just down the tramline from his Brisbane

QTH!  
News from the Bundaberg district indicates that there are now four 6 mrx stations in a nightly hook-up. It seems John 4ZMJ is thinking of a 50 ft. mast and Roy 4ZWR and Bill 4ZWS have been working on a tx and two super-regen rx's for 2 mrx.

The Ipswich Amateur Radio Club seems all set to appear on 8 mx. They intend to apply for a club call sign, but at the moment they will be using the call sign of Warren 4GT. Bill 4ZWB will be putting in a v.h.f. station from Ipswich in the near future. Bill has accepted a position at the local b.c. station.

Victor 4ZBT has not been the best. He has had quite a stay in hospital and by the time he got home he was still not well enough to truly recovered. Lawrence 4ZLL has been heard using a taxaphone on 6 mx - welcome to the bands OM.

John 4ZWB in Dalby has been having a good time with his new VHF station. New 4ZWB

time on 144 mags. While calling Bert 4CP in Toowoomba, he was called by 2WQ in Grafton. Not a bad effort for 250 miles on 2 m! By the time the v.h.f'ers say congratulations to David 4ZEK for taking out the VK4 honours in the last Ross Hull Contest, it is just about time for the next Contest. Anyway, David well done.

I had words with Jim 4ZRA who hopes to be on the bands soon. Certain stations have already been using certain phonetics for his call sign, but these cannot be published or broadcast. What did you say about Rosy Apples Tom? Ross 4ZAT has been calling from Bribie Island on 144 mags. He was in doubt about the efficiency of his wear until someone heard

If recently you heard the "Duke of Deson" calling swing corners, promenade, ladies to the centre . . . do not think the worst had happened as it was only a very active lately in progress. The grape vine was only a very active lately in progress. It came from the towns that Hamlin, one of northern towns, were very busy with amateur. Further, who were very busy with the a.v.h.f. station listening to 40L mobile on 40 mx when he should have been tuning 6 mx? I hope the Jamboree on the air v.h.f. was a big success. It should have been with all those

## WESTERN AUSTRALIA

The field day over 12th-13th Sept. was a big success. Lance 6LR tried to reach a trig point 7 miles east of Bindoon but wound up in a field exercise being conducted by some branch of the services. He got the password eventually for he was on the air for the 1

a.m. session. He called several stations who never came back and would like you to switch the beam north next time. Ken 5ZBT had trouble with a 2k.v.a. motor alternator. Its big end and main disintegrated due to using wrong oil. Trevor 5ZCA had a squashed petrol tank due to bad road near his Dwellingup site. The winner looks like Ken 5ZBT with 12,430 points, followed by Charles 5LK 11,770 points. Andrew 6ZCW, in Bunbury, won the

home station section with 7,725 points. The fox hunt on 19th Sept. was won by DAW 62BZJ and Green 62BZG second by matter of seconds. ELR was bogged for two hours in a swamp nearby. He saw a red parking light on the next hill and gave her the gun. The swamp was a pretty big bunker. Roy 62ZBD managed to extract him after they found the aerial poking through the water. The fox was well hidden and quiet too, using the p.m. Jaws as well as moon too. Bill had chosen the site for a beer-up, despite miles of surrounding bush in the South Riverton area. Each hound had a raucous welcome and some extra guidance as the gun had failed. Supper was at Bill 62BZJ's residence, 73 62AG.

wart organiser, Frank 2ACQ. Lee (2AXX), of Christian Brothers' College, Wollongong, at present has a booklet Y.R.S.I. (Administrative Details) which he is sterilising for club leaders, so you should send Lee a half-foolscap envelope (stamped with 8d.) print Y.R.S.I. in bottom left corner and include one 5d.

A nice budget of news from 4 Uncle Charlie There are now 15 registered clubs. 4PRA with Rupeoid, 4ID in charge and local studios and club member Bob Stroud (operating making contact with 4WL, 4PI, (VKA President), 4R (Clontarf High), 4DS (De La Salle College), 2AH (Inverell High and Lee 2AXX (Bogangar). New club, 4PRA (run by teachers Ken Keith), Yeronga High (70 members and 3 teachers). Ipswich Amateur Radio Club has formed a strong and active Youth Section which meets on Friday nights at the RSL of Waterloo. 4GT (with 22 members (10 to 18 years) with projects ranging from xtal set to 4-tube superhet. Office-bearers are Malcolm Rouse (Pres.), Peter Twining (Sec.), John Beattie (Treas.). Publicity in the Ipswich Press brought in 40 old radios. They aim to have a station licensed next year.

Cloontar High is on the air three afternoons a week looking for contacts from 3.15 to 4. Claude 4UX is to address the October meeting of the Science Teachers' Association of Qld on R.S. organisation, display some gear and operate a station. There is to be an article in about 2 weeks' time in the "Prosewing and Gladstone" Teachers' Journal. Prossewing and Gladstone Scout Groups are very keen but stranded - no Amateurs in the area, not even somebody mildly interested in Radio, to help them!

news from VK3 is interesting and wide spread. Blind Amateur Cyril 3AUM and Rose Everett, of A.P.L., are assisting with Royal Victorian Institute for the Blind at Burwood. Cyril is standardizing and simplifying the method of writing on tinplate, and Cyril is arranging the Braille on lettering. Robin Howland, of Scotch Cat College gives the news that Peter Garde should be home in October. The Scotch Cat College is active on 2 mhz and hopes to enter for the c.w. contest in October. At Korumburra reports members building wide range of projects including a 1000 w.c. amplifier, etc. The VK3 club at Stratford High with Mr. W.H. P. K. Alcock, WIFL 5100 bears the load a man the Australian Postal Institute. Dave Buck and the club are great supporters of the Y.R.S. Boys. They have recently received their first QSL card from Division President of VK3, who also wrote a letter of encouragement.

Sunday, 13th Sept., was open day at the Christian Bros. Edmund Rice College, Bundaburra. Harry 3EK installed a portable tx to demonstrate the use of the R.C.C. display to a demonstration audience. Bio indication to club members. A 100w transmitter was loaded into a long wire antenna on the roof and the following VK stations were contacted: JTL, JAVK, 3DF, JEO, JYL and 3MO. Each of the boys had a turn at the mike and were impressed by the way a net was quickly formed and contacts made. From the certificates of the Y.R.C. display were the elementary equipment, books and tools, etc., owned by the club. The crystal sets and one-valve rx built by the boys are part of the practical work they were also working. Special credit to the club who were able to fill a classroom with items that created interest among the parents and other boys of the school. (Thanks for this info Dave 3ZMX.)

I had a chat to Bob 5OD on the air recently and was glad to hear things are moving generally in VK5. I know time is needed to get things going so will be looking forward to the next few months in VK5, especially after the schools resume in February.

Would like to talk to more Y.R.S. stalwarts. I'm often operating VKIACIA (Canberra Radio Society) on 80 m., Friday night about 8.30. If anybody cares to give me a call, will appreciate it. 73, Ken IKM.

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# S W L

Sub-Editor: Chas. Abernethy, WIA-L2211  
33 Urunga Parade, Miranda, N.S.W.

## TIT-BITS FROM TIN

In QSLing to a broadcast station even the scantiest information, like, "I heard your station, please send me a card," will nearly always receive a speedy return of something from a card. So, if the printed matter under the sun is S.W.ling it is easy as station want your name to boost their known listening audiences.

The same is not the case when replying to an Amateur. A report like "I heard you working my neighbour last night, please send me a card" will not get very far. Your details must be good. They may be used some day to that Amateur. If the average S.w.l. has a return better than 5% of the number sent out, he is lucky. Cards cost money, so be on the ball with every relevant detail and your returns may improve.

It is a sorry state that the VXT group had disbanded through lack of support. If there are not enough members to keep the group going for meetings, how about someone keeping the issue of S.w.l. numbers alive?

Well yet another year is drawing to a close. Don't forget that Ross Hull, WIA-L2211 Contest text, is a long time supporter of the contest. Ross Hull was an Australian but spent much of his later life in America. A tireless worker with the A.R.R.L. "QST" and the Handbook and many activities both in and out of Amateur Radio. He met his untimely death by being electrocuted from the high voltage supply of t.v. set on the night of 13th Sept., 1959.—Tim, L2032/22TM.

## FREQUENCY AND WAVELENGTH

(Continued)

How engineers define the word frequency is by the number of complete waves or cycles of the particular signal which would pass a given point in one second, hence the term cycles per second.

But why talk about cycles-per-second when there are more convenient terms available? Remembering that 1,000 cycles is equal to 1 kilocycle, we can express the frequency of the wavelength quoted as 1,000 kc. per second or simply 1,000 kc. To take the abbreviation one step further, it can be expressed as 1 megacycle per second, i.e. 1 Mc.

From all this we can derive a simple formula. To convert wavelength in metres to frequency in kilocycles, simply divide into a figure of 300,000. The formula works both ways, so if you divide frequency into kc. into 300,000, you get the wavelength in metres. Finally, our wavelength is equal to 1,000 kc., and that is equal in turn to 1,000,000 cycles.

For convenience of reference, the radio frequency spectrum is divided into bands. Of interest to the average experimenter are the medium and high frequency bands. These bands cover from 300 to 3,000 kc., and from 3,000 kc. to 39 Mc. respectively. The familiar broadcast band lies within the first mentioned band. The 300-3,000 kc. band is the short wave band; it is really the high frequency band, the major International short wave stations collecting at various spots.

## NEW SOUTH WALES

In the steady increase of members to our meetings continues, then our committee will be rewarded for their effort to revive interest over the past twelve months. It is certainly gratifying for the chaps who come along each month to see the new faces appearing, and we trust that they will continue to do so.

Ross L2211 is busy excavating for the erection of his tower, which by now should be on the way up. Sorry that you missed the R.D. Contest, but holidays are important as well. OK on your new countries.

Ray L2032 seems to have a very long F.B.R. VR, YIA, KSC, KM6, KW6, YV1, C7R, F2U, UAU, UW, and 9M2 with QSLs from YN1AH and VK1QJQ. Nice going Ray.

Don L2022 was in Sydney during September, but owing to a mishap could not get along to attend the meeting, so I have missed the chance to have met you OM.

Ray Bermeir: I trust that my reply was to your satisfaction and the pamphlets were of some value. If I can be of help at any time just drop a letter to me.

Sid L2258 has had rx trouble, but is once again back in business. Many thanks for your continued assistance re this page, it has been much appreciated.

Eric L3942 has words with me once a week over the blowin' and I would say that he is gradually getting back on the air. He sends his regards to all his mates down south.

## VICTORIA

Eric L3942 is in direct contact with CORB (Cubs) by mail and can pass any S.w.l. reports to him at any time. He is sending all QSL cards for VK direct to him for distribution. A rare QSL received in the form of one from WOEY/Mobile 8 because it is for a temporary address. Eric says he is on a vacation trip in his car. When Eric heard him he was near Chicago on his way home. Other QSLs to hand: CO2, FO8, KM6, KP4, KV4, MP4, UD6, UF8, UL7, UR2, VQ1, YNI, 4U1, VYD, etc. More, but have space trouble, sorry Eric.

Lloyd L3141: Sorry to hear that the wind played such havoc with your antenna, and also of your QRM problems. Thanks for the copy of the London Island DX Bulletin, very good indeed. I shall return it to you later.

From the Black Rock boy, Greg L3138, comes the usual compact letter which contains plenty of activity, plus the result of the V.F.L. final, his it's a pity they don't play the N.S.W. competition down here. Thanks for the copy of the "Call Book" and the "DX Handbook" Editor. Latest QSLs received: OZ9, USA, UA9, ZS4, FO8, G3, VS1, MP4, YV5, etc. whilst heard covers quite a nice variety.

Drew Diamond, another keen lad who uses a home built rx with a home wave dipole, no some 20 ft. tall. That was a very impressive lot of DX received. I was very pleased to hear from you.

Drew L3071 is a s.w.b.e. Listener and sent quite a long list of stations received on those bands.

## QUEENSLAND

From the Brisbane boatman, Lew L4020, comes a photo of one of his catches of some really big fish. Quite a handsome trio—the two fish and the angler, hi! Recent logs: JA, KWE, XE, W8s and KA.

Charlie L4018 has sent me particulars of the Central Queensland Club which I will include in the article on awards in the next future. Congrats on being the first S.w.l. Oceanian member of the above club, and thanks for your nice remarks.

Thanks to A. Robson, of Rockhampton, and K. Reis, of Toowoomba, for their letters. I hope the printed matter was of interest.

## SOUTH AUSTRALIA

Last month I was pleased to add another name to the L5 list. This month it is my pleasure to add yet another name, and trust as time goes by to add many more. And trust to the page goes to Tim Corbin, L5067, who is going to hang a rung on the DX Ladder very soon. His first DX: KLT, HCI, ZET, VR and WY. Now he has started OM.

Alan L5065 continues on gaining the L5 section of the R.D. Contest. I hope that good tally in the R.D. brings you another first. OK on getting ready for the v.h.f. season. I think you will like those bands.

Brian L5068: I must apologise, as I have mislaid your letter and naturally cannot make any comments.

## WESTERN AUSTRALIA

From the long L5, Peter L6021, comes the usual interesting letter. This month Peter received 130 cards, in which were 14 new countries. This puts him in second place on the Ladder. Also to hand is the R.S.G.B. 21st 50 Mc. award which he won in 1963, nice going OM.

Congratulations to L2242, L3128 and L5049 for their respective wins in the Ross Hull V.h.f. Contest, 1963-64.

That's it for this month, chaps. Cheers, thanks to Tim and the members who have helped to make this page possible. 73, L2211.

## S.W.L. DX LADDER

	Countries	Zones	Conf.	Hrd.	Conf.	States	W
E. Trebilcock	284	293	40	50			
P. Drew	136	124	34	30			
D. Granity	124	120	38	35			
G. Earl	23	18	31	11			
M. Hilliard	90	241	33	14			
M. Cox	84	232	30	21			
G. Earl	69	150	31	7			
J. C. Keay	63	104	33	14			
N. Harrison	55	127	31	37			
L. James	51	144	24	10			
I. Thomas	42	139	20	14			
R. Beckley	27	50	19	—			
A. Raftery	21	126	15	3			
R. Oats	9	26	8	—			

# Publications Committee

## Reports . . .

The Publications Committee reports that all inwards Divisional notes, etc., received at P.O. Box 36, up to the evening of the 12th October have been published in this issue of "A.R."

In addition correspondence was received from VKs 9PL, 4NS, 3LK and 2YB, and Technical Articles came from VKs 1AU, 6DR, 5JT and 3ZEL.

No matter from VK2AVA was referred to the Victorian Division Council for decision regarding policy.

The Committee discussed the publication of a "History of Communication" from J. R. Cox and agreed it should appear in serial form in "A.R." as soon as possible. Proofs for the "Call Book" have been returned to the C.O. for authorisation to print and it is anticipated that the new edition should be available late in November. As already explained, the late publication date was due to negotiations with the P.M.G. and next year the "Call Book" will be issued in June-July.

Mr. D. M. Smith was welcomed to the Committee and will act as technical article reader and v.h.f. adviser.

The question of publishing the Christmas issues of "A.R." was discussed and the view of the holiday period shut-down at the printers the following will be publication and issues date:-

DECEMBER 1964: Copy required by 8th December for release on the 1st December.

JANUARY 1965: Copy required by 1st December for release late December or early January 1965.

FEBRUARY 1965: Due to the fact that this issue will be set up will during December 1964 for issue in mid February 1965, it will not be possible to publish any Divisional Notes, SWL, VHF, DX Notes, etc., nor DX Handbooks. This will apply ONLY to this issue. Accordingly, the February issue will be devoted to technical articles.

All readers are particularly requested to note the above changes in the issue of "A.R." for 1965.

Finance of "A.R." was discussed and it was agreed to maintain the current budget which may show a slight deficit for the year.

October issue, wrapped were returned from the October issue, whereas the Committee did not receive them until the following month. A current account was addressed. Members of the W.I.A. should notify their Divisional Secretary of any change of address. Direct subscribers should write to the Admin. Secretary W.I.A., C/o, P.O. Box 36, October 1964. Any change of address must notify the P.M.G. of any change of the address of their transmitting station, in addition "A.R." should also be advised.

Correspondents are again advised that ALL matters pertaining to "A.R." should be addressed only to P.O. Box 36, East Melbourne, C.Z. Vic.



## SUNSPOT ACTIVITY

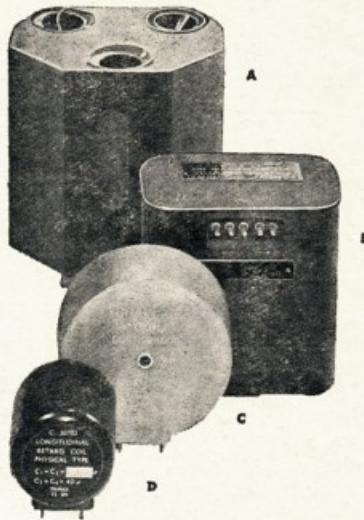
(or lack of it)

We should all know that a "Zurich Sunspot Number" is an indication of the level of solar activity. We should also know that at present sunspot numbers are near rock-bottom, so as to speak—and because of such a situation, the ionospheric layers are far from dense, and thus world-wide radio contacts are relatively low.

How many of you readers are aware that the Zurich Sunspot number (index) for August 1965 was 200; for August 1961, 52; and for August 1964, 87? (Analyse it for yourself and recollect the 1963 feeling, or you new-comers imagine what it must have felt like in 1968!!)

The "experts" are now forecasting that December 1964 could well be the current sunspot minima month—after that there will be a slow climb back towards (we hope) the 1963 maximum level (and the good old DX days).

—Eric Trebilcock (WIA-L3942)



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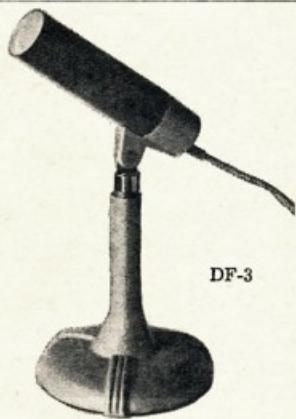
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# FEDERAL AND DIVISIONAL MONTHLY NEWS REPORTS

(SEND CORRESPONDENCE DIRECT TO DIVISIONAL REPORTER NAMED AT PARA. END)

## FEDERAL

### L.A.E.U. NEWS

#### Region II. Division

From 14th to 18th April, 1964, representatives from 16 I.A.R.U. Societies in Region II. met in Mexico City to form a Region II. Division of the I.A.R.U. A constitution patterned on that of Region I. was drawn up and an executive committee of six were appointed. Those appointed were:-

Chairman: Antonio Pita, XE1CCP.  
Vice-Chairman: Italo Giannattali, YSIUM.  
Secretary: Gustavo Teusens, OAAAV.  
Treasurer: Noel Eaton, VE3CJ.  
Member: Miguel Czysch, LU5DCA.  
Member: Robert Denniston, WUNWX.

The new division looks forward to receiving further membership from countries not represented at the inaugural meeting.

#### U.S.A. Reciprocal Operating Privileges

On 28th May, 1964, President Johnson signed a bill on reciprocal operating for Amateurs to eventually make it possible for foreign Amateurs to apply for operating privileges in the U.S. When this becomes law, the foreign Amateur will be able to use his own call sign with an appropriate portable suffix. The A.R.R.L. hopes that Societies interested in this participation will approach their administrations to obtain this agreement with the U.S. State Department.

#### U.K. Licence Structure

The R.S.G.B. has announced that as from 1st June, 1964, a revised licence structure has been instituted. Existing licences will be replaced over the next year. The new structure includes the Amateur, Advanced Amateur A, and Amateur T.V. Licences. Amateur A is the general licence, and Amateur B is a phone only licence restricted to operation above 420 Mc. with call letters beginning with G8 and three letter suffixes. Amateur T.V. licences will be assigned. On these letters followed by T, stations operating from a temporary location will now be able to use the prefix of the G country they are in followed by the call letters and /T. Log times will be kept on the G calls, while the frequency used, rather than the Amateur band, will also be required. As from this date, the 70 Mc. band will be extended to 70.1-70.7 Mc.

#### Newly Developing Countries

The following is in part the text of a letter from an official of one of the newer countries. This official is a member of the Amateur:

"American amateurs do indeed have a large responsibility for the future of Amateur Radio by virtue of their numbers and by the standards they set. In the developing countries, however, it is relatively easier for the local Amateur to maintain contact with the licensing authority and to establish a working relationship with them. A very great responsibility must therefore rest with those few Amateurs in DX locations. Most countries would like to know what we are doing; hence the desire for short-wave communication. Our job is to convince the right people that 100 Amateurs at 100 watts each are worth more than one 10kw. broadcast station! The way I see it, we need more publicity directed to the public and to the licensing authority of newer countries. Could we not emulate the practice of commercial companies by sending complimentary copies of 'QST' to many administrations?"

The above includes many words of wisdom with which we heartily concur.

#### Retirement of G6CL

32 years as secretary-general of the R.S.G.B., John Clarckson (G6CL), retired last December 31. Clarry was one of the leading lights in the founding of the Region I. Division of the I.A.R.U. and has consented to continue as secretary of the Executive Committee. We hope the W.I.L. add their felicitations to those of the I.A.R.U. in wishing him a happy retirement and satisfaction that his vast experience is not to be lost to world-wide Radio Amateur affairs.

#### Commemorative Stamp

The A.R.R.L. in celebrating its 50th anniversary this year is fortunate in highlighting the occasion by the approval of the U.S. Department of Post's request for the issue of a postage stamp honoring Radio Amateurs. For those philatelists who are interested, October was the month for issue.

#### New Union Members

The W.L.A. takes pleasure in welcoming the Jamaica Amateur Radio Association (J.A.R.A.), the Radio Amateurs Association of Greece (R.A.A.G.), and the Radio Society of Ceylon (R.S.C.) as new members of the I.A.R.U. Calendar 68 also announces proposals for the Amateur Radio Society of Barbados (A.R.S.B.) and the Chinese Radio Amateurs (C.R.A.) to become members. The W.L.A. has voted in favour of the A.R.S.B., but may in the case of the C.R.A., as in this case all of the qualifications for membership have not been met. The main point being that a licensed member of the C.R.A. only one is a licensed Amateur. It should also be noted that the old Association des Amateurs-Emetteurs du Maroc (A.A.E.M.) has changed its name to the Association Royale des Amateurs Emetteurs du Maroc (A.R.A.E.M.).

#### Amateur Band Intruders

In most I.A.R.U. Calendars are listed intruding stations into Amateur bands, as logged on a number of occasions by the International Frequency Registration Board of the I.T.U. which has 93 different monitoring stations located throughout the various sovereign nations. In the last Calendar a number of Russian stations were listed, but particularly on 70.1 Mc. was a station from the Russian Radio Sports Federation (R.S.F.), the Russian I.A.R.U. Society, has informed the hams that his government denies operation of any stations in the Amateur bands. We offer no comment on the above statement, but invite members who have the time to report any infringements of this nature through their Divisions. Forms should be available for reporting from your Division.

#### FEDERAL EXECUTIVE, 1964-65

The following Federal Executive Officers were appointed by Federal Council and notified on 31st July, 1964:-

Major Bill Mitchell, VK5UM, Fed. Vice-Pres.  
Major G. Hull, VK5ZS, Fed. Vice-Pres.  
Joy Lamson, VK5LW, Fed. Secretary.  
Robert Bonse, VK5NIN, Fed. Treasurer.  
David Rankin, VK5QV, Fed. Activ. Mngr.  
Alf Seidman, VK5JE, Fed. Business Mngr.  
Arthur Tinkler, VK5ZV, Fed. Com. Mngr.

The following co-opted officers of Federal Executive have been appointed for the tasks shown:-

Andy Jones, VK5RJ, QSL Officer.  
Alf Kinsick, VK5KHZ, Awards Officer.  
Tom Straughair, VK5ABV, Project Officer.  
George Glover, VK5AG, Historical Officer.  
Lionel Sharp, VK4NS, Contest Officer.  
Rex Black, VK5YA, Youth Radio Club Offc.

## NEW SOUTH WALES

### HUNTER BRANCH

And so the Hunter Branch Convention is past and gone. Convention that will be for the first time in many years the convention? "all male" dinner took a new face—indeed a new dignity—when we were favoured with the pleasant company of the ladies. And from all reports the ladies enjoyed it too. So why not make the social feature of our annual event? It certainly was the formula for success this year. All told, there were 80 members and guests at this most pleasant evening and following the formal speeches delivered by 2M0K, Peter 2APB, and Keith 2AKX, another Keith, ZAUU this time of the staff of Radio and Hobbies, gave us an interesting insight into the future. Keith called this his "Crystal Ball Night" and he chose to describe some pieces of equipment which will be featured soon in the magazine. Stuart 2AYF proposed a vote of thanks to Keith at the conclusion of the evening. Meanwhile, Frank 2APO kept things rolling at the top

table. I have not quite forgiven him yet, and those who were there will know what this is about.

To begin at the beginning is always a wise move and so I should report first the activities of the constructional competition. This was the best patronised competition we have ever had. The following were the constructors, in order of appearance: L. Williams, two sniffer; Mac ZEMO, two mix tx for the table top; Des ZZDN, two transceivers using transistors; Ian O'Toole, a low frequency rx; Bill ZWAN, a 6 m rx; Bill ZZCV, a 2 m transceiver; and Alan 2AZZ, 2m rx from Sydney, an ssb transceiver. As can be imagined, deciding the eventual winner was a difficult task indeed with such an array of first class gear. So difficult that members were asked to vote on the item of the day as to who to assist the committee. Des ZZDN who announced the winner at the prize giving ceremony the next day and his trophy, a c.r.t. donated by Phillips, was a fitting prize for such good effort.

At first the day looked like being a real beam reducer with winds of 40 m.p.h. or so on the morning of the Field Day, but things calmed down and the final judgment was "a good time had".

The hampram was won by Dave 2AWZ with the ether crusher while the early 2 m hunt, only other event of the morning, was a victory for Harold 2AHA. In the afternoon, things really did an about face when the Susan 2BSB and Alan 2AZZ, Elmer and a transister portable came in first in the 2 m reg. hunt. To say that the rig was carefully and cunningly concealed would be boasting I suppose, but it was wet in the water! I am led to believe that Susan's car is available to the winners until the end of October. Oh wicked the foxes. They choose the nastiest roads. In the afternoon 2 m hunt known as the Strongarm 500, first in was Harold 2AAB in 14 minutes! Remarks as to vehicle availability at above.

For those wishing to remain on the ground, there were two quizzers. The both were taken off by the Mullen household, Tony winning the technical section in a play off with Max 2AR. The quizzer was held in the kitchen section. And to cap it all, Tony also had been presented with the V.H.F. RD. prize the night before! Watch him lad! Best performance of the day went to Harold 2AAB and even the ladies were impressed. And to top it off, Pierce 2APB being the holder of the lucky number. As for the lucky gent, it was, or is at the present, me, for I have the prize of two 807s for the holder of ticket F52. Please come and claim your gear if you're so temerary.

In addition to all the festivities there were some items of gear to be seen and heard as well. Arle 2AVA had some very compact equipment for the ducktalking. A top band link was established between the hall and the Westakes Club and some clown in a beaten

## CLOSING DATES FOR COPY

### DECEMBER 1964 ISSUE:

8th NOVEMBER, 1964

### JANUARY 1965 ISSUE:

1st DECEMBER, 1964

### FEBRUARY 1965 ISSUE:

NO NOTES, etc. See  
Page 15 (Publications  
Committee Reports)

up. Alf supported under a monstrous whip did some mobile working on this band. You won't believe it, but Frank says it'll be even better next year.

Thanks to all who helped, especially Kevin, Norm, Chris, Bill, Barry and any others I've missed—you're the chaps who made it what it was.

It seems that that little bit has taken up all the space that Hon. Editor will allow, so it remains only for me to say that you must not miss the next meeting, November 6, at the R.A.C. and the place is 100, Pitt St., Sydney, block 10, at the Flights Hill Tech. We are to be treated to an unusual and most revealing lecture on Micronutritisation, to be given by Col. H. J. Trick, head of the Military Products Division of A.T.M. This is bringing some new members to show the "chaps" that will be the first showing to the public in Australia we are told. So don't miss it, whatever you do. We start at 8 p.m.

I'm a bit unhappy really. All these lucky chaps on holidays, Bill EXT in Japan, Lesley 3CX here, the rest everywhere—and I'm promised I wouldn't say the other one. Still I suppose there are compensations, I'll miss the meeting. By the way, did you know that our Arlie has a new name? you ask him. And the two old chaps are waiting for a long letter in the affirmative from the examinations branch. Best of luck chaps. 73, 2AKX.

## VICTORIA

### WESTERN ZONE

Quite a nice gathering took place in Nhill on Sunday, 27th September, when we held our Annual Convention. About 30 members and their families braved the rather wintry conditions. We were sorry that because of bad flying weather the flying group of the South Western Zone were unable to be with us. However, will order a day to suit next year, Don, KXL and party.

Officers elected for following year were: President, Mr. W. Edmunds, 3AJU; Vice-President, Mr. A. D. Gill, 3ADS; Mr. E. Semmler, re-elected; and Secy. and Treas., W. J. Kinsella, 3AKW, re-elected. A special committee was formed to organise W.I.C.E.N. activities. They are 3AUF (Clear Lake), 3AKW (Lubbeck), 3ADS (Glenorchy), 3AOS (Tealangatuk), 3ATH (Birchip).

The s.s.b. chappies seem to be the most active DXers. Harry 3ZK is now testing out a super quad with encouraging results. Ex-local Chas. VRIB, at present in the Gilbert Islands, is heard quite often on the DX bands and I believe will be back this way towards

the end of next year. Merv. 3AFO and family have just returned after their holidays which they spent touring Mildura and Canberra areas. 73, 3AKW.

## QUEENSLAND

Last month things were very quiet on the home front news-wise. Therefore I think it is about time that I declare this advertisement month. If you are intrigued, then the following is aimed at those who are unable to make the Sunday morning news broadcast from 4W1. With the exception of Queensland's progress, it is necessary that this Division progresses also. The VK4 Division does not intend to stand still however. With this in mind, we solicit all interested persons to join our ranks. If someone comes to your QTH inquiring about Amateur Radio, then invite him to become a member of the W.L.A.

You may wonder why news of your particular district does not come over 4W1 and wonder why we are not heard about your locality. The reason is that the only reason why we do not put your district's news on the air is that no one in your area can be bothered to send any news to us for broadcast. We welcome news, both personal and general, about the Amateur Radio Activities, Clubs, etc. from all parts of the State.

Therefore all clubs take note! Get your public relations officer to send us the news from your club. In fact, anyone is welcome to put any news on the air, provided it goes to 6324, G.P.O., Brisbane. It will be broadcast.

It was inadvertently stated in the September edition of "A.R." that the call sign 4WQ belongs to the Bundaberg Amateur Radio Club. I am sorry if this caused any confusion. The sentence should have read that 4WQ is the official call sign of the Wireless Institute of Australia, "Wide Bay and Burnett Branch" and that the station is situated at the club rooms in the Bundaberg Amateur Radio Club. I hope things are correct now. Anyway, has the station been heard yet? Notes from Wide Bay give it no mention this month.

Last six months something like fifty thousand words of news have been sent to 4W1. Fairly obviously, Queensland Amateurs have been active, but there is always the feeling of some that the bands could be used even more.

Well I hope you didn't mind those direct broadsides, but they have to be said every now and then if this Division is to keep to its policy of progress.

### YOUTH RADIO CLUBS

Discussions with a number of science teachers during a vacation school at the University of Queensland allowed a lot of publicity to be given to the Youth Radio Scheme. It seems that the Pomona Rural School, under the guidance of Garry Baker, will be starting a club. Hazel Mitchell of the Mount Isa High is keen and Ken Keith from Redcliffe High is at long last getting into the picture. Other possibilities that we have heard of include Yeronga State High, Gympie Christian Brothers, and a P.S. Tech. Gregory Terrace.

Cairns High is going along very quietly and it is being said that they are going to come on with a few hundred watts of s.s.b.—what say you, Ade? Big news for the month is 4PE, Padre Collins. They made the first contact with 4W1 during last month and then they worked the other two licensed youth radio clubs, 4RP and 4DS. At the time of writing, a Y.R.S. morsel contest was in view. Club champion from the school will probably compete against one another to find the VK4 champion. Both under 15 and over 15 divisions will be contested.

Specimen papers for junior certificates are now in the process of being put together and Harry AZHCO should be putting the lads through with them by now. A completely new set of conditions for the elementary and other awards has also arrived. Before leaving this subject, we wish to state in print that the VK4 Division youth radio clubs should have a young radio organiser such as Charlie 4UC. He has applied himself wholeheartedly to the job of interesting schools in the scheme and the results he has achieved in such a short time are truly outstanding. Keeping up the good work Charlie, I hope that by this time next year, your list of clubs will have increased fourfold at least.

Perhaps if our hopes are realized, we will no longer be discussing the Y.R.S. of the feeder but rather the covalent or ionic bonding mechanism exhibited by ammonium bi-fluoride.

### GENERAL NEWS

Recently Alf 4OL, who is the voice behind 4W1, took his annual holidays. The trans-

missions on Sunday mornings were made from a number of stations during the time Alf was away. We wish to thank these stations for making themselves available and we hope that the news was heard at your QTH at its usual strength. Alf has taken on a new job and should be able to attend the meetings at night for a change. He will probably be unable to attend the monthly meetings since he will now be working during the daylight hours and not at night as previously.

The other difficulties experienced with the production of "QTC" for September, this is another way of saying that the typewriter for the cutting of the stencils refused to operate satisfactorily. As the production of "QTC" is a voluntary effort, some delay was inevitable.

The September general meeting was not well attended due to the fact that "QTC" had not been published. Even the lecturer for the evening did not arrive. Impromptu lecturers were drawn from the body of the meeting participants. Paul 3EJ gave a talk on the use of Q multipliers and then Jim 4PF gave an interesting discussion on transformerless power supplies. Paul again arose and warned of the hazards of using such a design. Claude 4UX was present at the meeting and gave details of activity of the northern boys. 73, 4ZBD.

## SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for September was held as usual in the club rooms to a well-below average gathering of members and visitors, with the lecturer for the night being Rob 5SK. The title of "Spurious Radiations" had been called upon at very short notice to fill in for the night, but came along armed with copious notes on the subject but a wealth of practical knowledge gained from the field and various locations and call signs. Fortunately for me, he started off almost immediately with chalk and blackboard, naturally letting me out of any further cover of the lecture for I had the microphone. All went well and I can say, in this case, I was convinced. All that I can say is that judging by the rapt attention of those present, and the nature of the questions asked at the end of his talk, he achieved his object, that of giving us all something to think about and also perhaps to make it possible for Amateurs to live with their fellow Amateurs in peace and contentment and thus open up larger segments of the bands for operation by these same nearby Amateurs.

The vote of thanks to the lecturer was ably and sonorously hummed in given by Gilbert SGX, and the applause was again sufficient indication of the good job performed by Rob.

For some strange reason, known only to the powers that be, the meeting was closed at the end of the lecture, without any of the usual business side of the meeting being held, either Federal or General, despite the vocal objections of grumpy old Parsons 5PS, who was amiably disposed of by the President (Phil 5JT) in a most secret enjoyment and satisfaction of all present. Anyways, I should care, at least I got it into the minutes. I think.

Noticed the Rev. White, from the Central Methodist Church, present at the meeting as a visitor. Also noted that he was enrolled as an associate member later on. I checked up with him during smoke-up as to his reasons for joining so late in life. He told me that he is now 60 years old and retired and has taken up the threads of a hobby which he had always wished to participate in but up till now has never had the time to fully enjoy. He is to be congratulated on his decision, and who knows, one day in the future he might have his own call sign although when I suggested this to him he modestly thought not.

Understand that Joe 5JT is playing around with a reduced transmitter with particular emphasis on 7 Mc. He is still getting the antenna up on a stick, but is as lively as a cricket, although the first to admit that he never should have climbed up that beam at his age. Nice to hear about you Joe.

Also heard that Pat SKM, from Victor Harbour, is interested in the Swiss Quad, the

## TECHNICAL ARTICLES

Readers are requested to submit articles for publication in "A.R.", in particular constructional articles, photographs of stations and gear, together with articles suitable for beginners, are required.

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nature of which I am in complete ignorance. Swiss cheese by all means, but Swiss Quads, well I ask you?

Gilbert 5GX brazenly admitted at the meeting that he had recently attended a lecture at the Polytechnic Bracknell, and he cheekily referred to it as "meeting up with the Police radio". Take yourself in hand Gilbert, what with eating double ice creams in the main street of Kingcote and now in the clutches of the coppers, you are becoming a little devil. I must say though from the southern suburbs tell of Leith SLG running amuck with a lawn mower in the back garden the other day and cutting up his beam control cable. Heard him telling Uncle Tom (STL) of the incident on that occasion also hearing that Police would not be listening in. Well I was, see, and I did not have any cotton wool in my ears like all of your neighbours did, ten seconds after the beam cable finished in the grass catcher. Tutt-tut.

George 5OG, Garry 5ZK and Gilbert 5GX heard cutting themselves a piece of the DX that bobbed up on twenty recently. Gilbert got 20 over from Liverpool in one contact, but think it was because of him to point out to me with an obvious twinkle that all three were on s.s.b. Pooch to you!

With all this talk of DX on 20 mx around, I was somewhat taken aback to hear George 5RX say that he had not been doing much on the air as he had been gardening of late. DX around and George gardening. This I have to see!

In my long association with Amateur Radio as a hobby I have had a number of disappointments, such as, when they took my coherent away when they were giving us low power phone when they made me put filters in my power supply, to name a few. These little upsets of course I managed to take in my stride, but last month's frost dealt me a blow below the belt or should I say below where my boy should have been to win the discovery that VK3 we are sheltering a renegade, yes sir, a deserter to the cause. I could hardly believe my eyes. There it was in black and white, the Zentex Zone sub-sections other than Bassett SWC and to cap it all, having a shot at me to boot! To think this could happen to me, a VK5 writing for the VK3s, and from all appearances enjoying it too! Just goes to show what lengths they will go up to. What is man!

Talking of other Divisional subeditors, and who in the world would want to talk of other sub-editors? I notice upon reading the VK4 general news, that there is an "anonymous" who has put his name to some very sensible form and SWL 4ZBD! Just sign his name. Well, how would you be? Don't some people get it easy, no wonder they can't grow a straight banana up there!

Received a welcome letter from my espionage in the South East, unfortunately a little late for last month's notes, but still welcome news all the same. In it he tells me that the most notable achievement of recent date is that he had a full 100 per cent participation from the full field in the competition for the R.D. Contest. Ken 5GI and John 5JA blew the dust off their gear and worked 10 stations each, and Claude 5CH, Eric 5GU, Stuart 5MS and Col 5CJ all participated. Help indeed for the score for VK4. There was also an entry in the v.h.f. side of the game, Col 5ZKR managed to work five stations on 50 Megas and above, and finished up with 35 points for the five contacts. My spy thinks that this is probably the first time that this has happened in Australia. He also tells me that the 80 mx broadcats from SWL continue to be 5/9 in Mount Gambier.

Arriving home from toll the other Saturday evening, I had just turned the corner when noticed, with some trepidation, a somewhat familiar motor cycle with a Victorian number plate. Now the sight of a Victorian number plate at any time is enough to give me an attack of the trembles, but this car seemed too familiar for even an attack of the trembles to be enough to get the best of me. Soon enough, with the aid of the fire of the tent, who should be sitting on my best and most comfortable packing case, none other than the new Assistant gossip columnist in town in the meantime. That's right—that's right—what the use, it never gets me anywhere, none other than Ken 5AJF. Working on the old Arabian proverb that it is better to kiss the hand that one cannot bite, I greeted him with some remarks about turning down the hurricane lamp (it took me a week or so to remove the black smoke marks from the glass)—what's wrong with these VK3s, don't they ever practise economy?, anyway, as I said, I greeted him with some remarks, and we finished up with quite a long talk on matters radio, whilst he quaffed a long tank of muttons radio. He was off next day to Port Augusta, and was to return to Adelaide

on the Monday, and promised to spill some more salt at our table on that day. I have not heard or seen anything of him since that date and can only assume, and hope, that my smoke signals to the chief of the See Humphy W. W. have been passed just considerately were received and clear and so if so, then no longer will I have to bother about kissing hands that I cannot bite. Did he get back home Joan?

The Woomera Amateur Radio Club recently held its 10th annual general meeting to elect a new committee of management. The following officers were elected: President J. Mount, 5EV; Secretary, D. Avard, 5OF; Treasurer, J. Pepper; Council members, Ian Hunt, 5QX and T. Mitchell, 5TH. The QSL Manager is G. Alcock. The Officer is B. Wheeler, 5BV and last but by no means least, the Publicity Officer is T. Mitchell, 5TH.

It goes without saying that due to the floating population aspect of Woomera, the turnover of members is fairly high, but the average membership is around the mark. The average member is more or less Friday evenings at the club rooms at which experience (and enjoyment) is gained by the non-licensed members in the art of radio operating plus plenty of discussion centred on the techniques of Amateur Radio, etc.

The club has appointed the licensed members to a radio system for the monitoring of the Sunday morning broadcasts of SWL, and also for call-backs when SWC will be kept on the air until lunch time, and naturally contacts with the companies will be appreciated from all directions of the committee.

It will be seen from this brief report that Friday and Sunday constitute the bulk of the club activities on the air, and the licensed members will choose other times for their own DX activity. XYLs will be invited to SWC and give the boys the chance of a contact with the outside world, also the chance for the beginners to see just what makes Amateur Radio tick. Thanks for the notes from you, they are always welcome and who knows, you may well qualify for one of those mythical sought after certificates to be thrown about with reckless abandon by the Publications Committee.

Bumped into Norm Coleman the other day. After picking myself up, I could not but notice how well he still looked. He had a little gland trouble over the past year or so, which has somewhat slowed him down, but with a little dieting, plenty of attention from the XYL to say nothing of a little slow down in the airwaves, the recuperation of the North East, and all is now well. He still fatters me—his closing remarks as we parted were: "I was reading your notes in the magazine and I fell asleep before I could finish them." Thank you for those kind words, Sir.

Joe 5CK was in the air and left a letter for my personal that he had received from Bob SPW who is at the moment in America and from all appearances, thoroughly enjoying himself. At the moment of writing he and his family had just returned from a motor tour of Tasmania. John 5DZ, his informant sadly reports that he did not see one Ham antenna, mainly due to there being so many t.v. antennae in the sky that he could not see the trees for the woods, or something like that. However, he did not let me down, he did see plenty of cars on the highways with halos and whips, complete with call signs for number plates, although none of them seemed to stop just where he did. He mentioned how every time he stopped he was pelted with SLP and also wished to be remembered to all of the VK5 gang. No mention of when he is returning, but he is coming back via England and the Middle East. Thanks, Joe, letter much appreciated. T3, Bob.

Notice that the VK1 correspondent for the Youth Clubs activity now treats me with ignore since he has discovered Bob 5OD. Can't help but observe the different approach in his writings. Did he ever ask me for some news, and did we are friends? No sir, all he ever did to me was to try and shoot me down in flames! How are you Ken? Are we still buddies?

You notice Mr. Wilson (4RW) are not on charts, he is a member of ours yet—trying to put himself in for a "cuppa" with Muriel 2AIA in his notes last month? How cheeky can they get? If there are any "cuppas" going from that beauty of beauty, Muriel 2AIA, Month 2AXS, Hobart 2AOH and Verle 2MRA, then I am sure all our members' fingers on their hand will be holding the cup. Wen? I garris? Shush-h-h-h, not too loud, they might hear you!

No news lately of that old VK5 veteran Rupe 3RM. Buck 5DA, to say nothing of enquires from several other sources, was asking after you Rupe. What about a couple of lines some time?

It was good to hear at the meeting, in the new members' list, the names of several of the older ex-members who had decided to renew their subs. This is to the good, after several years' absence from the Divisional scene. I know of one old member who would have let their subs go for various reasons would probably join again with a little gentle nudging. Don't let that joining fee bother you. I would hate to hold out a sub. The general election of the Treasurer (Harry 5B7), joining fees, any other such simple by-laws never worry him. His telephone number is 53-2121, and he is not too proud to sign you up.

About a year or so ago, any time that one listened on 7 Mc. during the early afternoons, the University Amateur Radio Club (USAU) and the Prince Alfred Amateur Radio Club (SPARC) seemed to be the only VK5 stations on the air consistently at that time. These days it would be a novelty if either station was heard on at all. Fifty in a way, I suppose it is the old story, but the old story is still the driving force ones move on and the driving force is gone.

Thought the photo of Al 5ZC on the September cover of the magazine was a good one, the fact that it was a VK5 might have biased me a little. What's that? There is another one in black. Fardon me, my dictionary is a bit worn out. S.P.E., please yourself! Naturally living up to my name of a "padder", I prefer to use the extra letter! However, getting back to my subject, I had a look through some of my best photographs with the idea of sending them to the editor in the hope of making the front cover. I picked a beauty—one of my best poses—unfortunately my XYL tells me that a picture of me laying on my tummies in an outside in seascapes is not my best kick in the teeth. It would not have much appeal. A pity I had such a ducky blue ribbon around my chubby neck too!!

This month has been a bad month for news of any description. The bands are extra quiet, my exchange agents have been discontinued and my new working hours make listening almost impossible. However, just as I was going to put these notes to bed, along came "Info", the official journal of the Elizabeth Amateur Radio Club, from which, with out any compunction whatsoever, I pluck the last page of notes!

Bill 5WV is tinkering with the idea of giving s.s.b. a trial, and is at the moment of writing gathering the bits and pieces together in preparation. Ken 5PZ, Bill 5VE and Ted 5ZK have been heard on 80 m.w. Muriel 2AIA, much beloved spy adds, "keeping their hands in no doubt." Angus 5DE is busy rushing around the dongs and is conspicuous by his absence. What is he doing? Do you mean to tell me that you don't know what he is doing? You do know what a donga is? Well, well, well. How ignorant can one be. Do I know what a donga is? Haw-haw-haw! No! I don't!!

John 1QL (ex-5QL) is now domiciled in Canberra and appears quite keen on the club activities over there. Watch out for that Ken 1KNA, all VK5s are like me, John!

Ian 5IK is likely to return to VK5, no rumour goes that he is bad enough having them loitering on our border, let alone having to live with them. Keep away from Pincott 3AJP, he bites!

Ron 5FY is still reported as having almost given the game away and this assertion is being made much too frequent for my peace of mind. What about a statement OM? I am going to put at the continuation of the news that I intend to write personally. Watch for an unstamp envelop!

Well, this is it, at last the end. But before I close, I must tell you of one of the safety slogans that my source of income received from a slogan company of some sort. It was from a Boy Scout of somewhat tender age. I quote: "Don't smoke in bed—the sleeping bags you burn—may be your wife." Sit down my sweetness, not you! T3 de SPS. PanSy to you.

## WESTERN AUSTRALIA

This month we have had one contest, the 80 mx scramble which was quite a success with 100 entries. I am sure that the result was a pity, however that more did not take part as obviously many were just listening. The swap over to 80 in lieu of 40 was a move in the right direction with propagation being as it is.

Recently two of our members went over to Point Macquarie to attend the Communications Course and their reports were very good. It would appear, however, that the Establishment may not be very sound as one of them

sweats that the walls and mirror were moving one night. This could have been caused by something else however.

Activity on the various bands is very patchy, but one can hear quite a number of signals on 20 m. evenings. The weather is more however with the approach of summer and its problems for this band. Twenty metres has been coming to life in the evenings of late, with signals coming from Europe and India. American signals have also been coming in quite well.

Any country member who may have an item to be submitted for the agenda at next year's Federal Convention should submit it

as early as possible so that it can be processed and ready early. This does not only apply to country members, but also to any members.

Once again this month information has been very welcome and I would very much appreciate anything of interest being passed on to me. I believe that if anyone would like a demonstration of the cornering ability of a Freeway, they should try Geraldton for a likely place. Stories have suggested that you use a different story than the one used by one of the members already.

Bernie SKJ was travelling up to Perth and was using his Swan mobile and the signal on 20 m. was excellent. He believes many more Amateurs have or are building up mobile gear and we should hear more mobile signals in the future.

Your Council will be very pleased to receive any suggestions which you may put forward, if you have any complaints we would like to hear these also.

This seems to be all for now, chaps, so till next month, 73, Roy 8RY.

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## TASMANIA

It is strange how little information a scribe starts out with when writing information for this column (this scribe anyway), but, after a ten-minute QSO via 600 ohms with a certain person who seems to keep his ears open all the time, I think I've just about got enough to make a start.

Quite a few well known call signs have been heard on the air of late, some of them after quite considerable periods of silence. Bob TOM is back from VK4 after an absence of about 10 weeks. "Up there to work," so he said, but I wonder if he had a good time there. Another "long time no hear" signal is from Brian TBH, who I am told is back on specifically for the Jamboree, but we're hoping he will continue to be heard, not infrequently even after the said Jamboree.

Another one is Tony WJD whose signal at my QTH is in keeping with his physique—he believe he has his shack finished now, so should hear more of him now.

Douglas AB2 is back from New Norfolk to Oaklands in the course of his employment, so some t.b. sigs should be heard from the lower midlands when he gets his antenna farm organised.

Craig ICW has not been sighted at the time of writing, but if he is going to schedule he should be home in about a week from now—probably got himself so much new gear they will send him on a special flight.

I've noticed on the news reporting after the Sunday broadcast that the broomstick officer has to ask for a repeat call from some sideband station that haven't quite given him time to switch the product detector in, so what about a little longer call you say?

After quite a few weeks of trying a sure path has been found by Eddie ZBM out of Tarralak into Hobart on 2 mx, been getting 5 by 8 to 10 reports both ways, good work Eddie. Hope to work you myself soon.

Notice the Northern Zone President (Denny TDK) has gone a.s.b. Heard him on 35 Mc. Don't know as yet whether he is using it on v.h.f. or not. Knowing Denny, I reckon he'll try it this coming season.

It is planned to have quite an auction (American-as-in) in the Hamfest this year. Proceeds for the L.T.U. fund. So start looking out suitable items the other fellow might like to buy, and you're willing to donate! 73, Geoff YZAS.

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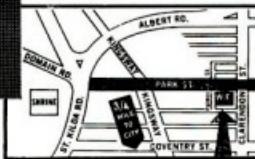
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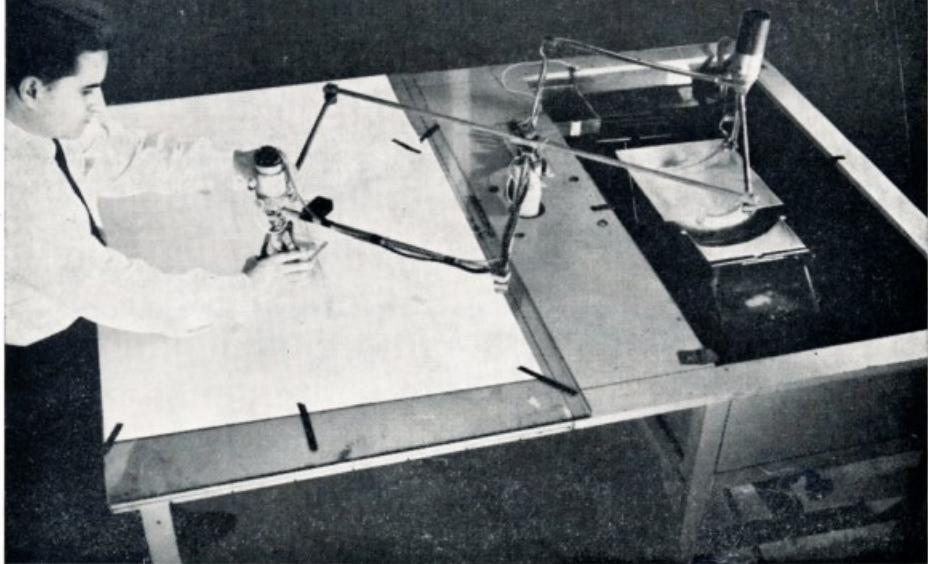
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